



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,991	02/06/2004	Robert K. Barr	52182	7091

7590 10/04/2006  
EDWARDS & ANGELL, LLP  
P.O. Box 55874  
Boston, MA 02205

EXAMINER

KELLY, CYNTHIA HARRIS

ART UNIT PAPER NUMBER

1752

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/773,991

Applicant(s)

BARR ET AL.

Examiner

Cynthia H. Kelly

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5,7,11-13,15 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5,7,11-13 and 15 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7-10-06</u> .   | 6) <input type="checkbox"/> Other: ____                           |

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5, 7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kangas et al. U.S. pat. No. 5,563,023 in view of Kuchta, U.S. pat. No. 5,112,721 in further view of Applicant's admission.

Kangas teaches a photoimageable element comprising a metallic substrate (item a below), a photosensitive composition on the substrate (item b below) and a layer of an adhesive coated on a second side of the substrate. (item d). The photosensitive layer (item b) is coated with a protective polymer layer as in claim 7. (item c)

*9. A photoimageable element comprising:*

*(a) metallic substrate coated with a primer layer on a first side*

*(b) a layer of photosensitive composition*

*(c) a protective overcoating comprising an oxygen barrier polymeric material  
antiblocking particulate material*

*(d) a layer of pressure adhesive material coated on a second side of the substrate*

*(e) a release liner covering the pressure sensitive adhesive*

The photoimageable element may be a negative or positive acting photoresist as shown in column 1, lines 10-23. The negative resist the exposed areas typically crosslink with the removal of the non-exposed areas.

Kangas does not teach the negative photoimageable composition has one or more sensitizers in an amount to make a color change and the sensitizer is

cyclopentanone based or the use of other color formers. However, Kuchta teaches photopolymerizable compositions use sensitizers such as cyclopentanone based compounds which act upon irradiation to enhance resolution. Kuchta further teaches additional color formers such as lueco dyes (col. 17). It would have been obvious to one of ordinary skill in the art to make the claimed article having an imaging composition including a lueco dye color former and cyclopentanone based compound as a sensitizer because Kuchta teaches using cyclopentanone based compounds in photopolymerizable compositions used in imaging applications result in improved resolution of the resulting image. See abstract and column 10, lines 62-65 of Kuchta.

Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tefler et al., U.S. pat. No. 5,681,676 in view of Kangas et al., U.S. pat. No. 5,563,023

Tefler teaches a method of applying an imaging composition comprising a sensitizer to a substrate (work piece) and projecting a 3-D image onto the imaging composition, including a sensitizer, so as to affect a color change in the imaging composition. The imaging composition is imagewise exposed using a laser (col. 10, line 52). Tefler does not teach an adhesive layer on the opposite side of the support. However, Kangas teaches making photoimageable elements having a photosensitive composition (imaging composition) on a substrate which has an adhesive applied to the opposite side. (see Kangas' claim 9 and col. 2, lines 8-12). It would have been obvious to one of ordinary skill in the art to use an adhesive on the opposite side of the substrate with releasing ability in order to place the resulting image on an additional

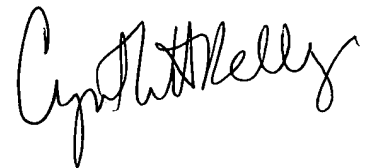
work piece if desired. Neither Kangas nor Tefler teaches using 5 mW or less to affect the color change. However, it is disclosed by applicant that the usage of more than 5mW would result in a hazardous environment for the workers. (Specification, page 3) Therefore, one of ordinary skill in the art would be motivated to use power of 5mW or less. Tefler does not specifically speak to selectively applying the energy as to affect an imaged pattern. However, Kuchta does explain that the light is projected through a mask onto the imaging element. (column 17). This would result in selective application of energy affecting an imaged pattern.

3. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. Applicant's arguments with respect to claim 5, 7, 11 and 12 have been considered but are moot in view of the new ground(s) of rejection.
5. Applicant has amended claim 5 to include that the photosensitizer is a cyclopentanone based compound. The prior rejection is withdrawn but an additional rejection is made herein. Also, a rejection over claims 13 and 15 (previously indicated allowable) has been added. Therefore, this action is non-final.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached on 571 272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700**

A handwritten signature in black ink, appearing to read "Cynthia H. Kelly". The signature is written in a cursive, flowing style with a large initial "C".